

REMARKS

Claims 1-39 are now presented for examination. Claims 1, 8, 16, 25, and 33 are independent. Claims 1, 5, 13, 16, 18, 26, 34, and 37 have been amended to define more clearly what Applicant regards as his invention, and to address a number of objections made by the Examiner.

In the Office Action, claims 1, 5, 13, 16, 18, 25, 26, 34, and 37 were objected to for reasons that apparently relate to antecedent basis, and claim amendments were suggested. Claims 5, 13, 18, 26, 34, and 37 have been amended in accordance with those suggestions, as set forth below. Claims 1, 16, and 25 have not been amended, because the objected-to terms are believed to have proper antecedent basis, as follows: (a) in claim 1, line 18, "the step of accepting payment" refers back to the "accepting payment" step at line 16; (b) in claim 16, line 12, "the price" refers back to "a price" at line 4; and (c) in claim 25, line 16, "the customer" refers back to "customer" at line 1 in the preamble.

The Office Action objected to the drawings because reference signs 53A and 54A are not mentioned in the description. Applicant respectfully disagrees. The price look up table 53A appears in the specification at page 16, lines 9-10, and the window 54A appears in the specification at page 14, line 24. Accordingly, Applicant respectfully requests withdrawal of the objection to the drawings.

All the claims were rejected under either: 35 U.S.C. § 102 as anticipated by U.S. Patent No. 5,640,002 (Ruppert et al.); 35 U.S.C. § 103 as obvious from Ruppert; or 35 U.S.C. § 103 as obvious from Ruppert in view of U.S. Patent No. 5,530,301 (Dumont). Applicant respectfully traverses those rejections.

The specification describes a system in which a portable unit is used to read barcodes on customer-selected items. The portable unit stores information relating to those items. After the customer has finished selecting items, the customer docks the portable unit at a self-checkout station. The portable unit communicates with the self-checkout station, and payment is accepted by the self-checkout station. Notably, there is a division of tasks between two distinct components: scanning is performed in the portable unit; the portable unit communicates with the self-checkout station; and the payment is accepted by the self-checkout station.

In Ruppert, payment is accepted by the portable unit – not by the self-checkout station (see, e.g., FIGS. 15, 16, and 26, and col. 17, lines 8-19 of Ruppert). Because the function of accepting payment is implemented in the portable unit, each and every portable unit in Ruppert must contain hardware to accept payment (such as a magnetic stripe reader or smart card reader). In contrast, in the embodiments described in the specification, the function of accepting payment is implemented in the self-checkout station instead of the portable unit. This allows the portable units to be smaller, lighter, cheaper, less complex, and more reliable than the portable units of Ruppert.

In Dumont, the payment is accepted in a self-checkout station, but the scanning is not performed by a portable bar code reader. A significant disadvantage of Dumont's system is that some of the barcodes may be hidden from view because all of the selected items are bunched together in the basket prior to scanning. As a result, the scanning operation must be implemented by techniques that can "see" through the product packages. Examples of such techniques described in Dumont include ultrasound waves, x-rays, and microwaves (see Dumont at col. 5, lines 54-56). This arrangement, however, cannot use conventional barcodes and requires special techniques like printing the barcodes with radio-opaque ink (see Dumont at col. 6, lines 31-33). Because these techniques are not in widespread use, industry-wide acceptance and standardization will likely be a large hurdle to implementing the system described in Dumont. In contrast, the embodiments described in the specification work with conventional barcodes. Since these conventional barcodes are already present on the vast majority of retail items, no similar hurdle to product acceptance exists.

In summary, in the system described in the specification, performing scanning in the portable unit enables conventional barcodes to be used, and omitting the payment-accepting function from the portable unit simplifies the portable unit and reduces its cost and size. These benefits are the result of specific language in each of the independent claims, as described below:

Claim 1, as amended, includes establishing a communication link between two system components: (a) a self-checkout station that includes an automated payment-accepting subsystem and (b) a data storage unit. Claim 1 also recites that the step of accepting payment is performed using the customer-operated automated payment-accepting subsystem, which is part of the self-

checkout station (component a). Because both the data storage and the payment accepting functions are performed in the same device in Ruppert, Ruppert does not implement the recited inter-component communication, and has to include the payment-accepting functionality in the data storage unit itself. Claim 1 is therefore believed patentable over Ruppert.

Claim 8 includes the step of linking the portable reading unit to a self-checkout station having a customer-operated automated payment-accepting subsystem. But in Ruppert, the portable reading unit is never linked to a self-checkout station with a customer-operated automated payment-accepting subsystem, because the portable unit in Ruppert already has its own payment-accepting subsystem. Claim 8 is therefore believed patentable over Ruppert.

The apparatus of claim 16, as amended, includes a data input port that inputs a plurality of data records from a portable data storage unit, and a non-portable customer-operated automated payment-acceptor. Because the payment accepting function and the data record storage are both implemented in the portable unit in Ruppert, Ruppert never inputs data records from the portable unit and does not teach or suggest a non-portable customer-operated automatic payment-acceptor. Dumont, which lacks a portable data storage unit altogether, does not remedy this deficiency of Ruppert as a reference against claim 16. Claim 16 is therefore believed patentable over the cited art.

The apparatus of claim 25 includes two distinct units: (1) a portable terminal including a data reader and a data output port; and (2) a self-checkout station including a data input port and a customer-operated automated payment-accepting subsystem. The portable terminal identifies selected items using the data reader, and sends information to the self-checkout station via the data output port. The self-checkout station receives the information from the portable terminal via the data input port and accepts payment from the customer for the selected items using the payment-accepting subsystem. Although Ruppert admittedly includes a customer-operated automated payment-accepting subsystem, the payment-accepting function in Ruppert is implemented in the portable terminal itself, and not in a device that communicates with the portable terminal. As such, Ruppert does not contain any component that both receives information from the portable terminal and accepts payment from the customer. Dumont, which does not receive information from a portable data storage unit at all, does not remedy this

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deficiency of Ruppert as a reference against claim 25. Claim 25 is therefore believed patentable over the cited art.

Similarly, claim 33 includes: (1) a portable terminal including a data reader; (2) a self-checkout station with a customer-operated automated payment-accepting subsystem; and (3) a base station that receives information from the portable terminal and outputs the information to the self-checkout station. Because the payment-accepting function in Ruppert is implemented in the portable terminal itself, Ruppert does not contain any component that both receives information from the portable terminal and outputs the information to the self-checkout station. Dumont, which does not receive information from a portable data storage unit at all, does not remedy this deficiency of Ruppert as a reference against claim 33. Claim 33 is therefore believed patentable over the cited art.

The other claims in this application each depend on one of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Applicant's undersigned attorney may be reached in our New York office by telephone at (914) 421-4609 or by facsimile at (914) 421-5203. Please continue to direct all correspondence to Customer No. 22249 at the address provided below.

Respectfully submitted,

LYON & LYON LLP

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By: Robert S. Mayer
Robert S. Mayer
Reg. No. 38,544

633 West Fifth Street, Suite 4700
Los Angeles, California 90071-2066
(213) 489-1600

SET OF CLAIMS WITH MARKINGS TO SHOW CHANGES MADE

1. (Amended) A method for retail check-out comprising the steps of:
 - establishing a communication link [with] between (a) a self-checkout station incorporating a customer-operated automated payment-accepting subsystem and (b) a data storage unit in which a plurality of data records are stored, each of the plurality of data records corresponding to a respective one of a plurality of identifiers that was read by a portable data reading unit before the communication link was established;
 - inputting the plurality of data records from the data storage unit via the communication link established in the establishing step;
 - determining a price total for a plurality of items corresponding to the plurality of identifiers based on the plurality of data records inputted in the inputting step; and
 - accepting payment for the plurality of items based on the price total determined in the determining step,
 - wherein the step of accepting payment is performed using [a] the customer-operated automated payment-accepting subsystem.
5. (Amended) The method of claim 1, wherein the portable data reading unit comprises a barcode reader selected from [the] a group consisting of: a flying spot scanner, an optical imaging reader, and a wand reader.
13. (Amended) The method of claim 8, wherein the step of linking comprises [the] a step of placing the portable reading unit into a cradle on the self-checkout station.
16. (Amended) A self-checkout station comprising:
 - a data input port that inputs a plurality of data records from a portable data storage unit;
 - a first controller that determines a price for a plurality of items corresponding to the plurality of data records inputted via the data input port; and
 - a non-portable customer-operated automated payment-acceptor that generates an output signal based on an amount of tendered payment,

wherein at least one of the first controller and the automated payment-acceptor generates an indication when a tendered payment is sufficient to pay the price determined by the first controller.

18. (Amended) The self-checkout station of claim 17, wherein the portable data reading unit comprises a barcode reader selected from [the] a group consisting of: a flying spot scanner, an optical imaging reader, and a wand reader.

26. (Amended) The system of claim 25, wherein the identifiers are barcodes, the data reader identifies the selected items by reading the barcodes, and the data reader comprises a barcode reader selected from [the] a group consisting of: a flying spot scanner, an optical imaging reader, and a wand reader.

34. (Amended) The system of claim 33, wherein the data reader identifies the selected items by reading barcodes, and the data reader comprises a barcode reader selected from [the] a group consisting of: a flying spot scanner, an optical imaging reader, and a wand reader.

37. (Amended) The system of claim 33, wherein the base station memory stores a price look-up table, and wherein a total price for selected items is computed based on [the] a price look-up table.